1. (amended) A compound represented by structure 1:

$$R_5$$
 X Y P ZR R_5 X Y R_2 R_3

1

wherein

X represents O;

Y represents independently for each occurrence O;

Z represents independently for each occurrence O;

R is selected, independently for each occurrence, from the group consisting of H, alkyl, heteroalkyl, aralkyl, heteroaryl, and heteroaralkyl;

R' is selected, independently for each occurrence, from the group consisting of H, alkyl, heteroalkyl, aryl, aralkyl, heteroaryl, heteroaralkyl, acyl, and sulfonyl;

 R_2 , R_3 , and R_4 are independently selected from the group consisting of R_6 , -OR', -SR', -NR'₂, -OSO₃H, and -OPO₃H₂;

 R_5 is selected from the group consisting of R_6 , -(CR₂)_nOR', -(CR₂)_nSR', and -(CR₂)_nNR'₂;

R₆ is selected, independently for each occurrence, from the group consisting of H, alkyl, heteroalkyl, aryl, aralkyl, heteroaryl, and heteroaralkyl;

8

42. (amended) A method of synthesizing a compound represented by 1, wherein said method is represented by the following scheme:

wherein

X represents O;

Y represents independently for each occurrence O;

Z represents independently for each occurrence O;

the oxidizing agent is selected from the group consisting or dioxiranes, percarboxylates, and persulfates;

R is selected, independently for each occurrence, from the group consisting of H, alkyl, heteroalkyl, aryl, aralkyl, heteroaryl, and heteroaralkyl;

R' is selected, independently for each occurrence, from the group consisting of H, alkyl, heteroalkyl, aryl, aralkyl, heteroaralkyl, acyl, and sulfonyl;

R₂ is OR';

 R_3 , and R_4 are independently selected from the group consisting of R, -OR', -SR', -NR'₂, -OSO₃H, and -OPO₃H₂;



R₅ is selected from the group consisting of R, -(CR₂)_nOR', -(CR₂)_nSR', and -(CR₂)_nNR'₂;

and

n is an integer selected from the range 0 to 10 inclusive.

45. (new) A compound represented by structure 2:

2

wherein

X represents O;

Y represents independently for each occurrence O;

Z represents independently for each occurrence O;

R represents independently for each occurrence aryl;

R' is selected, independently for each occurrence, from the group consisting of H, alkyl, heteroalkyl, aryl, aralkyl, heteroaryl, heteroaralkyl, acyl, and sulfonyl;

R₂ is selected from the group consisting of R₆, -OR', -SR', -NR'₂, -OSO₃H, -OPO₃H₂;

R₃, and R₄ are independently selected from the group consisting of R₆, -OR₇, -SR',

-NR'2, -OSO3H, and -OPO3H2;

 R_5 is selected from the group consisting of R_6 , -(CR₂)_nOR₇, -(CR₂)_nSR', and -(CR₂)_nNR'₂;



R₆ is selected, independently for each occurrence, from the group consisting of H, alkyl, heteroalkyl, aryl, aralkyl, heteroaryl, and heteroaralkyl;

 R_7 is selected, independently for each occurrence, from the group consisting of H, alkyl, heteroalkyl, aryl, heteroaralkyl, and sulfonyl;

and

n is an integer selected from the range 0 to 10 inclusive.

